

REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested. Currently, claims 1, 3-4, 6-9, 11, 13-14, 16-19, 21-22, 24-27, 29, 31-32, 34-37, 39-40, 42-45, 47, 49-50 and 52-54 are pending in this application.

Election/Restriction:

The Office Action states "Examiner considers claims 2, 12, 20, 30, 38, 48 are also drawn to species depicted in figure 3 which was not elected. Simply venting two different streams to atmosphere at two different locations is not considered to be equivalent to controlling the outlet pressures to be the same as in these claims. Local variations in atmospheric pressure would prevent this."

While the above noted claims have been canceled, the limitations therein have been incorporated into their respective base claims. The limitations required by these (now canceled) claims are generic to each of Figs. 1-3. That is, the limitations of these claims are directed to elected Fig. 1 in addition to non-elected Figs. 2 and 3. The limitation of (now canceled) claim 2 which has been incorporated into base claim 1 (similar comments apply to claims 12, 20, 30, 38 and 48 and their respective base claims) relates to the back pressure within the sample probe being controlled so that it is equal to a static pressure of an outlet portion of a duct. The originally-filed specification indicates that this limitation is directed to, among others, Fig. 1. For example, paragraph [0021] of the originally-filed specification states the following:

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“Vent portion 22 of sample probe 20 and the outlet portion of duct 40 (top portion of duct 40 illustrated in Fig. 1) are vented to atmosphere. The existing back pressure within the entire sample probe 20 is minimized to atmospheric pressure (P_{atm} - as illustrated in Fig. 1) and matches the static pressure in the outlet portion of duct. The existing back pressure is thus controlled so that it is uniform throughout sample probe 20. In particular, the existing back pressure is uniformly equal to atmospheric pressure in those portions of sample probe 20 where inlet ports 21a-21e are formed. As the back pressure in sample probe 20 becomes ambient (i.e., equal to P_{atm}), the spatial sample representativeness approaches isokinetic (emphasis added).”

Accordingly, the limitations previously required by claims 2, 12, 20, 30, 38 and 48 (and now required by respective base independent claims) are clearly directed to, among others, the elected embodiment of Fig. 1. The control of the back pressure in Fig. 1 is a passive control, but a control nonetheless as described in paragraph [0021] of the specification. Local variations in atmospheric pressure (noted by the Office Action) would merely be a source of error just like any other error in pressure measurement if the discharge pressure were controlled.

Accordingly, Applicant respectfully requests that the limitations recited in (now canceled) claims 2, 12, 20, 30, 38 and 48 which now been incorporated into their respective base claims be examined.

Specification:

The Office Action states “The amendment filed 03/04/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure.” The March 4, 2005 Preliminary Amendment merely fills in a number for a previously

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blank application number which has been incorporated by reference. This clearly does not enter new matter into the original disclosure. As noted in MPEP §608.01(p), guidelines for situations where Applicant is permitted to fill in a number for application no. _____ left blank in the application as filed can be found in *In re Fouche*, 439 F.2d 1237, 169 USPQ 429 (CCPA 1971).

In the present application, the application to be incorporated by reference is clearly well identified enough to distinguish it from all others. In particular, the incorporation by reference application was identified by an attorney docket number, title, filing date (“filed concurrently herewith”), inventorship and assignee (“commonly assigned”). Accordingly, the March 4, 2005 Preliminary Amendment does not enter new matter into the present application.

Rejections Under 35 U.S.C. §102 and §103:

Claims 1, 7, 10, 11, 17, 19, 25, 28, 29, 37, 43 and 46 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Apley et al (U.S. ‘720, hereinafter “Apley”). Applicant respectfully traverses this rejection.

For a reference to anticipate a claim, each element must be found, either expressly or under principles of inherency, in the reference. Each element of the claimed invention is not found in Apley. For example, Apley fails to disclose or suggest, *inter alia*, receiving an isokinetic sample of fluid flowing through a duct into a plurality of inlet ports of a sample probe without respective flow controllers by controlling back pressure within the sample probe so that it is equal to a static

pressure of the duct's outlet, as required by independent claim 1. Independent claims 11, 19, 29 and 37 require similar limitations.

Through the above claimed limitations, the present invention accomplishes isokinetic sampling of a fluid flowing through a duct without throttling valves being coupled to inlet ports of the sample probe. This feature is supported by, for example, paragraph [0025] of the originally-filed specification which states the following:

“The system can thus obtain a spatially representative sample of gas flowing through duct 40. The flow of sample into each inlet port 21a-21e is controlled by the controlling the back pressure in sample probe 20 to match the static pressure in an outlet portion of duct 40. The flow of sample in each inlet port 21a-21e is at least proportional to the local mass flow at the inlet port and becomes equal to the local mass flow (i.e., isokinetic) if the back pressure is controlled to P_{atm} . Independent port flow controllers are not required. Instead, the fluid's motive force serves as a proportional driver. Representative sampling can therefore be accomplished while avoiding the complexity of performing discrete multi-point sampling (emphasis added).”

Instead of using flow controllers to control the flow from each inlet port of the sample probe to a determined pressure difference, the present invention uses the duct's flow (kinetic pressure) to drive inlet port flow so that the flow across the inlet ports will be proportional to the flow in the duct. This can be achieved by controlling the back pressure within the sample probe so that it is equal to a static pressure of the duct's outlet.

In marked contrast, Apley discloses throttle flow control valves 32 positioned between each of the sampling port lines 26 and various fluid analysis systems. Flow control valves 32 in Apley's system are throttled to control the pressure in tap lines 28.

Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §102(b) in view of Apley be withdrawn.

Claims 1, 3, 8, 9, 11, 13, 18, 19, 21, 26, 27, 29, 31, 36, 37, 39, 44, 45, 47, 49 and 54 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Monticelli, Jr. (U.S. '647, hereinafter "Monticelli") in view of Apley. Applicant respectfully traverses this rejection.

As noted above, independent claim 1 requires, *inter alia*, receiving an isokinetic sample of fluid flowing through a duct into a plurality of inlet ports of a sample probe without respective flow controllers by controlling back pressure within the sample probe so that it is equal to a static pressure of the duct's outlet. Independent claims 11, 19, 29, 37 and 47 require similar limitations.

Monticelli discloses monitoring flow 6 in trunk 7 at one point using a single sample intake tube 18. The sample intake tube 18 is connected directly to a first valve 19 which opens to a tube 20. Accordingly, even if Monticelli were combined with Apley, the combination would not teach or suggest obtaining an isokinetic sampling with a sample probe having a plurality of inlet ports without respective flow controllers.

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Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §103 in view of Monticelli and Apley be withdrawn.

Claim 53 was rejected under 35 U.S.C. §103 as allegedly being unpatentable over Monticelli in view of Apley and further in view of Carleton et al (U.S. '299, hereinafter "Carleton"). Since claim 53 depends from claim 47, all of the comments made above with respect to base claim 47 apply equally to claim 53. Applicant submits that Carleton fails to remedy the above described deficiencies of the combination of Monticelli and Apley. In particular, Carleton discloses obtaining a "balanced" sampling (see col. 5, lines 25-27), rather than an isokinetic sampling. Carleton also fails to teach or suggest controlling a back pressure within a sample probe so that it is equal to a static pressure of a duct outlet so that an isokinetic sampling may be achieved.

Accordingly, Applicant respectfully requests that the rejection of claim 53 under 35 U.S.C. §103 in view of Monticelli, Apley and Carleton be withdrawn.

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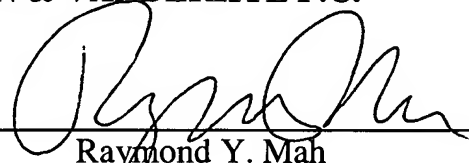
Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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